



**ANALYSIS OF THE CURRENT AIR FORCE-
SPECIFIC STATUS OF RESOURCES AND
TRAINING SYSTEM (SORTS) REPORTING
SYSTEM**

THESIS

Tia A. Jordan, Captain, USAF

AFIT/GLM/ENS/04-07

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

The views expressed in this thesis are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the United States Government.

AFIT/GLM/ENS/04-07

ANALYSIS OF THE CURRENT AIR FORCE-SPECIFIC STATUS OF RESOURCES
AND TRAINING SYSTEM (SORTS) REPORTING SYSTEM

THESIS

Presented to the Faculty
Department of Operational Sciences
Graduate School of Engineering and Management
Air Force Institute of Technology
Air University
Air Education and Training Command
In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Logistics Management

Tia A. Jordan, BS

Captain, USAF

March 2004

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

AFIT/GLM/ENS/04-07

ANALYSIS OF THE CURRENT AIR FORCE-SPECIFIC STATUS OF RESOURCES
AND TRAINING SYSTEM (SORTS) REPORTING SYSTEM

Tia A. Jordan, BS
Captain, USAF

Approved:

// signed //
Lieutenant Colonel Stephen M. Swartz (Chairman)

12 Mar 04
date

// signed //
Major Bradley E. Anderson (Member)

12 Mar 04
date

ABSTRACT

The status of resources and training system (SORTS) is a process that measures the “health” of units and wings in day-to-day preparedness and the ability to execute a major theater war or other scenario envisioned in the national security strategy. With talk of the current reporting system not accurately reflecting units’ readiness, it is time to evaluate the system to identify key problems and re-design the process to better reflect units’ capabilities. The objective of this thesis was to inform Air Force leadership of the current state of the SORTS system to ensure it was adequate. By surveying current MAJCOM, Wing, Group, and Squadron users on their interpretations of how the system works, this thesis will determine if there are common problems that key users have encountered.

Acknowledgments

I would like to express my sincere appreciation to my thesis advisor, Lt Col Stephen Swartz, for his guidance throughout this thesis effort. I truly appreciated your insight and experience. I would also like to thank my reader, Maj Bradley Anderson, for his help throughout this process as well. This entire effort has been valuable.

I am also grateful to the personnel who spent their valuable time participating in my survey. They provided feedback on readiness reporting, which was very critical information for this thesis. Special thanks to MSgt Jubal Combs, MSgt Steven Scroggins, and SSgt Teresa Steele, who served as my liaisons and were always available to answer my questions.

Most importantly, I would like to thank my parents. They have both served as great role models and have always shown patience, understanding, support, and unconditional love. Thank you.

Tia A. Jordan

Table of Contents

	Page
Abstract	iv
Acknowledgments.....	v
List of Tables	viii
List of Acronyms	ix
I. Introduction	1
Overview.....	1
Problem Statement	1
Research Questions.....	2
Investigative Questions.....	2
Data Sources and Analysis.....	3
Scope and Limitations.....	4
Summary	6
II. Literature Review.....	7
Overview.....	7
Background.....	7
Purpose.....	9
Requirements	10
Concerns	13
Summary	21
III. Methodology	24
Method of Approach.....	24
Delphi.....	26
Justification of Approach.....	27
IV. Results and Analysis	29
Overview.....	29
The Research Process	29
Investigative Questions.....	30
ESORTS.....	43

	Page
V. Findings and Recommendations	48
Finding 1	48
Finding 2	49
Finding 3	49
Finding 4	50
Other Recommendations.....	50
Appendix A. SORTS Analysis Survey	52
Appendix B. Summary of Responses	56
Bibliography	64
Vita	66

List of Tables

	Page
Table 1. Overall Information Per Respondent	32
Table 2. Issues Breakdown By Organizational Level.....	34
Table 3. Issues Breakdown By MAJCOM.....	35
Table 4. Issues Breakdown By Rank	36
Table 5. Issues Breakdown (Weighted Percentages) By Organizational Level	37
Table 6. Issues Breakdown (Expected Values) By Organizational Level	38
Table 7. Issues Breakdown (Weighted Percentages) By MAJCOM	39
Table 8. Issues Breakdown (Expected Values) By MAJCOM.....	39
Table 9. Issues Breakdown (Weighted Percentages) By Rank.....	40
Table 10. Issues Breakdown (Expected Values) By Rank.....	41
Table 11. Chi-Square Analyses Summary	42
Table 12. Issues vs. ESORTS Comparison.....	45

List of Acronyms

ACC	Air Combat Command
AEF	Aerospace Expeditionary Force
AF	Air Force
AFI	Air Force Instruction
AFSC	Air Force Specialty Code
AMC	Air Mobility Command
ART	AEF Reporting Tool
CINC	Commander in Chief
CJCS	Chairman of the Joint Chiefs of Staff
ESORTS	Enhanced-Status of Resources and Training System
GSORTS	Global Status of Resources and Training System
HAF	Headquarters Air Force
HQ	Headquarters
JMETL	Joint Mission Essential Tasks List
JULLS	Joint Universal Lessons Learned System
MAJCOM	Major Command
MET	Mission Essential Task
OPTEMPO	Operations Tempo
POC	Point of Contact
SORTS	Status of Resources and Training System
UTC	Unit Type Code

Analysis of the Current AF-Specific Status of Resources and Training System (SORTS) Reporting System

I. Introduction

Overview

This chapter discusses the background and rationale for this study. This thesis examined how the current status of resources and training system (SORTS) reporting system works and some concerns about the system. More importantly, this study gathered feedback from members using this system in the field to determine whether or not SORTS is effective. This chapter is divided into six areas: problem statement, research questions, investigative questions, data sources and analysis, scope and limitations, and a summary.

Problem Statement

SORTS is a process that measures the “health” of units and wings in day-to-day preparedness and the ability to execute a major theater war or other scenario envisioned in the national security strategy. With talk of the current reporting system not accurately reflecting units’ readiness, it is time to evaluate the system to identify key problems and re-design the process, if necessary, to better reflect units’ capabilities. Air Force leadership needed to know if the current process for measuring units’ readiness levels was adequate. By surveying current Major Command (MAJCOM), Wing, Group, and

Squadron users on their interpretations of how the system works, this thesis will find out if there were common problems all the key stakeholders encountered.

Research Questions

The objective of this research was to determine if personnel using SORTS felt the system was adequate and effective in measuring the health of units to perform their missions. This thesis focused on getting feedback from personnel who work with the system. In order to determine how effective it was, the following questions needed to be answered: 1) How well did the current SORTS system measure units' readiness; and 2) What were the main issues with the system and how did they affect the desired outcome? This enabled further documentation of the system because it gave personnel a chance to provide feedback and/or make suggestions to improve the system.

Investigative Questions

The objective of this research was to analyze the current SORTS reporting system, and make recommendations and suggestions based on inputs from members who use the system in the field. The thesis should answer the following questions:

1. What are the objectives of the current SORTS reporting system?
2. Does the current reporting process meet these objectives?
3. Who are the key players in the SORTS reporting system?
 - a. Who provides the information?
 - b. Who uses the information?

Furthermore, this study sought to determine if differences between respondents existed, and if they did, was this based on varying degrees of importance with each issue, or if the different organizational levels, MAJCOM, or ranks were influential factors.

Data Sources and Analysis

The first investigative question was answered by researching AFI 10-201, “Status of Resources and Training System”, to establish the objectives of the current SORTS system. This Air Force instruction governed the SORTS program and established the purpose and goals of the system.

The second and third investigative questions were answered through conversations with OPRs at the Headquarters Air Force (HAF), Wing, and Squadron levels as well as questionnaires distributed to MAJCOM, Wing, Group, and Squadron leaders to find out how they used the system and if they have had any problems. This data will be analyzed to see if there are common problems and identify key differences with the various levels of involvement.

This study involved a situation where little historical records or data was available, so content analysis was the design chosen for this qualitative study. Content analysis is a detailed, systematic assessment of the contents of a particular body of material in order to identify patterns, themes, or biases (Leedy, 2001:155). Therefore, the data relied heavily on the efficient use of intuition and judgment of a group of persons who were keen observers and had extensive experience and knowledge in the subject area. This was why the Delphi technique was used.

This technique was designed to elicit opinions from a group with the aim of generating a group response.

“Delphi replaces direct confrontation and debate by carefully planned, anonymous, and orderly program of sequential individual interrogations usually conducted by questionnaires. The series of questionnaires is interspersed with feedback derived from the respondents. Delphi may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem” (Wellman, 2003:30).

Members of a group were questioned anonymously via email questionnaires. Subjects were asked to list and explain issues, and after each set of questions, a summary of the group response was obtained. The responses were grouped with similar responses and to determine if there is a pattern of issues with the system.

“Delphi collects and organizes judgments in a systematic fashion. This technique gains input, established priorities, and builds consensus. Delphi organizes and helps focus dissent, turning this group effect into a window of opportunity, while protecting the subjects’ identities, consolidating group responses by eliminating extraneous material, and assuring each respondent’s input is included in the final responses and reduces the pressures of group conformity by revealing range of responses submitted” (Wellman, 2003:31-32).

The last question was addressed by comparing the most prevalent problems with the governing AFI to see if these issues were addressed, there were misinterpretations of the objectives, or the objectives needed to be revised. This data was used to make recommendations for the current AFIs and manuals or future upgrades to the system.

Scope and Limitations

As stated previously, the Air Force is not the only branch of the Armed Forces that uses SORTS for official readiness reporting. Over 10,000 units in the DoD report readiness using SORTS (GAO/NSIAD-96-111BR, 1996:4). Due to the nature and scope

of this thesis, a comprehensive analysis of issues for each branch and its organizations could not be accomplished in the timeframe of this study. Therefore, this study was designed to analyze the current AF-specific SORTS system, particularly Air Combat Command (ACC) and Air Mobility Command (AMC) MAJCOMs. Both of these MAJCOMS contain bases with operational missions. Also, each MAJCOM has one location where a mixture of personnel, whom could be potential survey respondents, was co-located from the MAJCOM, Wing, Group, and Squadron levels.

There were various limitations that could affect the analysis of SORTS. Some limitations that could not be controlled could include:

1. In some circumstances, members may be motivated to report what they think their leadership wants to hear when it does not accurately reflect their current perceived concerns. Sometimes people do not answer honestly because they do not like to go against the majority or for fear of retribution. As a result, the inputs they provide are not the most accurate. Also, interview questions may impose a format bias unintentionally. The questions used in this study may have been interpreted differently by each respondent, which could have affected the data used in this study.
2. SORTS is a classified report, which may make information not readily accessible. In addition, respondents may not be able to openly discuss concerns if it is considered a classified topic. This factor limits the information respondents can provide on the survey.
3. Delphi is not a universal remedy and another form of communication may actually be better for this study. We decided to use the Delphi technique, but there were other qualitative methods that could have been used. For example, a case study or grounded theory study could have been used because both focus on understanding a situation in its natural setting.
4. Researchers may over specify the area they are studying and not allow for other views of the problem. The questions provided to the respondents may have been too narrowly focused and did not allow the respondent to expound on all the issues they had with the system that the researchers were not looking for.

5. Generation of an artificial group consensus by ignoring disagreements is another way data could be skewed. This also relates to the way researchers group data. The way data is combined with similar responses could have easily varied with another set of researchers. Therefore, this is a judgment call by the researchers and accounted for in their results and analysis.
6. Underestimation of the demand placed upon respondents by the technique could have affected the data. For example, respondents may have been busy with work or pressed for time and were not able to put as much time in filling out the survey as some other respondents. Personal and professional obligations may limit the amount of time each subject can dedicate to responses.
7. Responses may not always be independent. Although respondents were given questionnaire individually, there may have been some collaboration with the responses if individuals discussed the questions with other individuals.
8. There were different levels of expertise within the subjects in the SORTS field. The respondents varied in years of service, years working with SORTS, AFSCs, and education levels. These factors could have affected how well the respondents worked with SORTS.
9. The future may bring about drastic changes in which the results from this thesis may not apply. Therefore, the results do not apply to every organization in the Air Force (Belka, 2001:48-51).

Summary

This chapter discussed pertinent information that set the framework for this thesis, which is to determine if the current system for measuring unit readiness was adequate. Since there was no past documentation evaluating the SORTS reporting system, data will be gathered from personnel who have used the system in the field to determine if any concerns exist. The next chapter focuses on important background information concerning past readiness problems. More specifically, Chapter II will review existing literature concerning issues with military readiness.

II. Literature Review

Overview

Questions have been raised that the current readiness reporting system, SORTS, does not accurately reflect units' readiness (Orlansky et al, 1997:II-3). Therefore, Air Force leadership needed to know if the current process for measuring units' readiness was adequate. The goals of this thesis were to give some background information on SORTS, present the purpose of SORTS, show what was required in the SORTS report, address concerns with the current system, and justify why this analysis needed to occur.

Background

SORTS is an internal tool for use by the Chairman Joint Chiefs of Staff (CJCS), Services, Unified Commands, and Combat Support Agencies. It is the single automated reporting system within the DoD that functions as the central registry of all operational units of the U.S. Armed Forces and certain foreign organizations. There are three main purposes for this system: 1) provide critical data to crisis planning; 2) provide data for the deliberate planning process; and 3) to be used by the CSAF and subordinate commanders in assessing their effectiveness in meeting their Title 10, United States Code responsibility (AFI 10-201, 2003:8). SORTS is designed to support crisis response planning; deliberate or peacetime planning and provide the Chairman with Service-unique information regarding a measured unit. The Service Chiefs' management responsibility is to organize, train, and equip forces for use by the combatant commands as well as participate in the joint planning and execution process (GAO/NSIAD-96-194, 1996:2-3).

As a resource and unit monitoring system, SORTS indicates the level of selected resources and training status required to undertake the full mission set for which a unit is organized or designed to do. The Air Force uses status information in SORTS in assessing readiness and the impact of budgetary allocations and management actions on unit level readiness. SORTS provides broad bands of information on selected unit status indicators which includes the commander's assessment of the unit's "health" or ability to execute its mission. Measurement criteria are designed and developed by functional managers to provide valid assessments regarding unit readiness, and Commanders assess measurements against their mission set to determine whether or not they provided a realistic indication of the unit's readiness (AFI 10-201, 2003:1).

Readiness is, as the Deputy Under Secretary of Defense for Readiness described it,

"the general ability of forces to arrive where they are needed, on time and prepared to effectively carry out assigned mission objectives for which they were designed. The ability of units to be ready on time to carry out their missions, in turn, is a function of having the equipment, supplies, logistics and experienced people with the skills to accomplish assigned tasks" (Orlansky et al, 1997:S-1).

The DoD assesses military readiness at three levels—(1) the individual unit level; (2) the joint forces level; and (3) the aggregate, or strategic, level. "Unit readiness" refers to the ability of units, such as Army division, Navy ships, and Air Force wings, to provide capabilities required of the combatant commands and are derived from the ability of each unit to accomplish its mission. "Joint readiness" is the combatant commands' ability to integrate and synchronize units from one or more services to execute a mission. "Strategic readiness" is a mixture of unit and joint readiness with great emphasis on the ability of the armed forces as a whole, including the services, the combatant commands,

and the combat support agencies, to fight and meet the demands of the national security strategy (GAO/T-NSIAD-96-111BR, 1996:1).

Until the early 1990s, the DoD defined “readiness” narrowly in terms of the ability of units to accomplish the missions for which they were designed, and SORTS was the only nonservice-specific system DoD had to measure readiness. It had been used extensively by the services to formulate a big-picture view of readiness. As a result, limitations to SORTS surfaced and were well documented for many years by various audit and oversight organizations (GAO/T-NSIAD-98-124, 1998:3).

Purpose

SORTS is the DoD’s automated reporting system that identifies the current level of selected resources and training status of a unit or in other words its ability to carry out its wartime mission. Units report their overall readiness status as well as the status of four resource areas: personnel, equipment and supplies on hand, equipment condition, and training. Overall readiness status is generally reported at a level consistent with the lowest rated resource level, but commanders are allowed to subjectively upgrade or downgrade the overall rating. As stated previously, SORTS is an internal management tool used by the Chairman of the Joint Chiefs, services, and combatant commanders. It provides the Chairman with the necessary unit information to achieve an adequate and feasible military response to crisis situations and participate in the joint planning and execution process (GAO/T-NSIAD-96-111BR, 1996:1).

The DoD has over 10,000 units that reported readiness status under SORTS (GAO/T-NSIAD-96-111BR, 1996:4). SORTS remains the basic building block for readiness assessment. Any discussion of readiness measurement has to start with SORTS because

it is the foundation of DoD's unit readiness assessment process—the primary source of information used for reviews at the joint and strategic levels. Even though the system is widely and heavily used, inherent limitations such as the inability to signal impending changes in readiness and imprecise ratings for unit resources and training may be reflected in reviews at the joint and strategic levels (GAO/T-NSIAD-98-124, 1998:2).

The system's database indicates, at a selected point in time, the extent to which these units possess the required resources and training to undertake their wartime missions. SORTS is intended to enable the Joint Staff, the combatant commands, and the military services to, among other things, prepare lists of readily available units, assist in identifying or confirming major constraints on the employment of units, and confirm shortfalls and distribution problems with unit resources (GAO/T-NSIAD-98-124, 1998:2-3).

Requirements

Readiness status of a unit is reported by assigning "C" levels, which are the degree to which unit resources meet prescribed levels of personnel, equipment, and training.

They measure combat readiness and any associated resource constraints and are defined as follows:

- C-1—Unit can undertake the full wartime mission for which it is organized or designed.
- C-2—Unit can undertake the bulk of its wartime mission.
- C-3—Unit can undertake major portions of its wartime mission.
- C-4—Unit requires additional resources and/or training to undertake its wartime mission, but if the situation dictates, it may be required to undertake portions of the mission with resources on hand.
- C-5—Unit is undergoing a service-directed resource change and is not prepared to undertake its wartime mission (GAO/T-NSIAD-96-111BR, 1996:1)

If a unit is not fully ready (C-2 or lower), the reason for that condition must be reported (Orlansky et al, 1997:II-2).

A readiness reporting system should be designed to address three goals: 1) respond to congressional readiness concerns; 2) provide adequate readiness information to assist the Secretary of Defense, CJCS, CINCs, agencies, and services in performing peacetime and warfighting missions; and 3) revise reporting in the context of efforts to transform the defense establishment to meet future challenges. Modernized reporting should be based upon a systems or process approach that represents an organization or group of organizations with a common goal.

Readiness is a measure of the ability of systems to achieve goals and should have actual output compared with required output (Tillson, 2000:2).

“The basic steps in a systems approach to readiness reporting are (1) identifying the systems whose readiness will be reported, (2) determining the output required of the system, (3) identifying the parts of each system and collecting the added data needed to determine their readiness in terms of output, and (4) requiring the responsible CINC, agency, or service to report on the readiness of their system.” (Tillson, 2000:2)

This method provides an overall assessment for the entire force from individual units to the National Command Authority (Tillson, 2000:2). A systems approach gives participants in the system an opportunity they lacked today—to see where they fit and how their actions affected the whole system.

A systems approach offers a better measure for judging modernization and transformation by integrating future operational requirements in a systemic assessment program. Understanding readiness to execute a task requires understanding the readiness of a system designed to execute that task. A systems approach to readiness reporting also offers a coherent and comprehensive basis for discussing both operational capabilities and resource allocation. Such a method could increase the capacity to meet near-term requirements and reward the process of transformation (Tillson, 2000:4). Knowing the readiness of large, complex systems is based on an appreciation of the readiness entities that made up the systems. They include operational units as well as supporting entities—depots, ports, pre-positioned equipment, communication nodes, hospitals, training centers, and inventory control points—that were critical for readiness. Each report its readiness to conduct mission-essential tasks associated with its role in the system whose readiness is being reported (Tillson, 2000:3).

In this approach, the goal has to be measurable, comparing the actual capability with objective goals. Lacking a measure of how deficiencies contributed to the readiness system, the effort to eliminate a defect tends to lead to micromanagement or sub-optimization. They simply lack a comprehensive view of how the problem under investigation contributed to readiness. This may have occurred because resources intended to fix a problem may not have promoted improvement because both reporting organizations and the Pentagon were stovepiped. In essence, the goal needs to be measured in terms of the influence on the throughput of the system, which leads to a search for the weak link that created a bottleneck or constraint in the system (Tillson, 2000:3).

Concerns

The following section is a summary of reported SORTS issues from a GAO analysis. This includes problems the Air Force, Navy and Army encountered, Guard and Reserve issues, weaknesses in readiness reporting during the Gulf War crisis, and DoD actions taken to resolve these issues.

SORTS is the principal report available to the Office of the Secretary of Defense and The Joint Staff on the training readiness of the four services. “SORTS has been judged—not always fairly—by the GAO and the Congressional Budgeting Office as being based on inaccurate data and subjective assessments” (Orlansky et al, 1997:IV-1).

For example, prior reviews by the GAO and other agencies found:

- SORTS represents a snapshot in time and does not signal impending changes in readiness.
- SORTS relies on military judgment for certain ratings, including the commanders' overall rating of unit readiness. In some cases, SORTS ratings reflect a higher or lower rating than the reported analytical measures supported. However, DoD officials viewed subjectivity in SORTS reports as a strength because the commanders' judgments provided professional military assessments of unit readiness. The officials also noted that much of the information in the SORTS reports was objective and quantitative.
- The broad measurements that comprise SORTS ratings for resource availability could mislead managers because they are imprecise and therefore could mask underlying problems. For example, SORTS allows units to report the same capability rating for personnel strength even though their personnel strength may have differed by 10 percent.
- SORTS data is maintained in multiple databases located at combatant commands, major commands, and service headquarters and is not synchronized across the databases.
- SORTS data is possibly out-of-date or nonexistent for some units registered in the database because reporting requirements are not enforced.
- Army SORTS procedures that require review of unit reports through the chain of command significantly delay the submission of SORTS data to the Joint Staff (GAO/T-NSIAD-98-124, 1998:3).

Other assessments showed another list of criticisms to the report. Although there was some overlap, new findings were also documented below (Orlansky et al, 1997:II-3):

1. The system, although mandated by CJCS, reflects unit (i.e., Service) rather than Joint readiness. Joint combat capability, observable in Joint exercises, are not reported in SORTS
2. SORTS reports generic readiness, rather than CINC mission-specific readiness. Its structure and format do not use the recently adopted standard of Joint Military Essential Task List (JMETLs), used now by all regional CINCS for training in their assigned mission.
3. SORTS describes current readiness; it does not include estimates of future readiness over periods of, e.g., 6 months, 12 months, etc.

4. SORTS does not distinguish between conducting required training programs (i.e., process or training accomplishment) and demonstrated combat capacity (i.e., output or performance effectiveness). The results of joint exercises are reported in the Joint Universal Lessons Learned System (JULLS) but not in SORTS. These results are narrative reports not designed for inclusion in a numerical data base.
5. Significant item in SORTS, such as overall combat capability (i.e., the C-level ratings) could be based on commanders' subjective assessments, rather than on objective, demonstrated performance capability. Greater use of objective measures are now feasible and generally available in data compiled on instrumented ranges and in command post exercises that used combat models.
6. SORTS did not include the following information regarded as central to current and future readiness:
 - Mobility (Mobility is a Navy Primary Mission Area reflected in SORTS)
 - Morale
 - Leadership
 - Command, control, communications and intelligence
 - Exercises
 - Funding for training and OPTEMPO (Orlansky et al, 1997:II-3)

Questions about the validity and thoroughness of the military readiness reporting have been raised for some time now and are periodically reported on limitations to official unit readiness reports. Congress expressed concern regarding apparent inconsistencies between official readiness reports and the actual readiness of units in the field. Some concern was also raised pertaining to the DoD's lack of progress in integrating additional readiness indicators into official readiness reports because the approved legislation required DoD to include the indicators in its reports too (GAO/T-NSIAD-98-124, 1998:1).

Perhaps the most critical problem is that the current system does not measure the capability of the Armed Forces to accomplish the missions established in the national security strategy. Instead it focuses on one or two major theater wars and a limited set of

tasks associated with those missions, forcing CINCs, agencies, and services to focus their reporting on narrow functional areas that do not address the full range of operational tasks (Tillson, 2000:1). Other criticisms included essential elements are not being reported, the overall system lacks comprehensiveness, and its inability to indicate readiness to execute strategies. Also, SORTS is said to capture data only on a major weapon system and other critical equipment in which a study found value in monitoring the availability of equipment not reported through SORTS (GAO/T-NSIAD-98-124, 1998:8). The study also said the report lacked specific details on deficiencies and planned remedial actions needed for congressional oversight. This presented a vague picture of DoD's readiness problems. One report said Army personnel readiness was a problem, but failed to provide data on the numbers of personnel or units involved. In addition, the report did not discuss how the deficiency affected the overall readiness of units involved. Furthermore, remedial actions were given in general terms with few specific details and provided little insight into how DoD plans to correct the problems (GAO/T-NSIAD-98-124, 1998:6).

GAO Analysis

Past literature also stated that SORTS does not capture all of the factors that the DoD considers critical to a comprehensive readiness analysis and indicators of personnel readiness, such as operating tempo and personnel morale (GAO, 1996:2,11).

The Department has a process in place that identified and corrected readiness problems when they emerged, and this demonstrates the DoD's continuous vigilance and commitment to readiness as its first priority (GAO/T-NSIAD-96-111BR, 1996:16). DoD-wide, the percentage of military units with the ability to undertake all or major

portions of assigned missions remained generally stable from January 1, 1990, to March 31, 1995. Readiness reductions were caused primarily by personnel shortages, equipment shortages, and difficulty in obtaining training for personnel in certain military occupations (GAO/T-NSIAD-96-111BR, 1996:2).

A GAO report analyzed military readiness data contained in the DoD's SORTS to determine if the data showed significant changes in readiness since 1990—a year of peak readiness. This report provided readiness information for the four military services. Specifically, it summarized the reported overall readiness status of all military units from January 1, 1990, to March 31, 1995 and assessed readiness trends of selected units from each service for the same period. When applicable, it discussed reported readiness problems experienced throughout a service and by the selected units and explained significant changes in the reported readiness of the selected units (GAO/T-NSIAD-96-111BR, 1996:1). For the selected units, data elements and identified trends were graphed and the readiness was compared with operational scheduling and maintenance data. Then, these conditions were discussed with readiness officers from the respective services (GAO/T-NSIAD-96-111BR, 1996:4). There were significant differences in the way each service manages readiness and reported readiness fluctuated with deployment and maintenance cycles. There were also significant changes or fluctuations in the readiness of five active Army units due to contingency operations and the National Guard units overstated their readiness by understating the number of training days required to achieve a C-1 status (GAO/T-NSIAD-96-111BR, 1996:2,3). Reduction or fluctuation in the readiness of airlift and Airborne Warning and Control System units occurred because aircraft were continuously committed to the operations in Saudi Arabia, Somalia, and

Bosnia. The heavy usage of airlift aircraft with contingency and counterdrug operations strained the supply of spare parts and engines in conjunction (GAO/T-NSIAD-96-111BR, 1996:3).

Navy Problems

The Navy has also documented problems with their readiness reporting. Five of eight Navy aviation units showed a similar readiness trend. In the remaining units, significant reductions in readiness levels were identified, and the training readiness of aviation squadrons Navy-wide declined significantly due to the shortage of flying hours funding and personnel shortages (GAO/T-NSIAD-96-111BR, 1996:9). The percentage of Marines that reported C-1 or C-2 declined due to insufficient flying hours and normal variations due to detachments deploying from home, or parent, unit to support contingency operations. This degraded the readiness status of a parent unit, which then began to build toward its next commitment. The continuous cycle of deploying the best-trained personnel and mission-ready equipment may have caused changes in the reported status of the unit or caused it to remain at a low level over time. Although readiness for many of the units were stable, it was not at the desired level because highly skilled military occupational specialties were scarce because the Marine did not have their own facilities to train personnel for these skills (GAO/T-NSIAD-96-111BR, 1996:11).

Army Problems

The Army also reported problems in this study. Contingency operations and equipment maintenance problems caused a general reduction in readiness reported by National Guard units. In some cases, commanders' subjective upgrades of overall readiness ratings were incorrect or assessments were not as accurate when the reporting

unit was deployed carrying out peacekeeping or security operations. The National Guard had more stringent reporting requirements which caused them to understate the number of training days required to achieve C-1 status. In retrospect, there was no way of determining whether the upgrades were justified because many commanders viewed the SORTS report as “report cards” on their performance and therefore made every effort to present the unit in the best light. This was a standard, deliberate part of the process that provided a more complete assessment of a unit’s readiness (GAO/T-NSIAD-96-111BR, 1996:13).

Guard and Reserve Problems

As for the Air Force, Guard and reserve units were the most stable, but they still encountered problems. Viewing reserve components as an integral part of the total force, their aircraft were continuously used to support Desert Storm, Somalia, and Bosnia operations, along with counterdrug operations. This affected the reported readiness of Air Force units during this period. In fact, some units were over utilized from 58% to 175%, which caused greater demand for spare parts and engines and accelerated the rate at which the aircraft required major repairs. Commanders have the prerogative to upgrade or downgrade their unit’s overall readiness status. Air Force commanders however did sometimes upgrade their units’ overall readiness status. Although the study did not consider upgrades to be a problem but a strength, there are critics who felt the subjective upgrades take away from the effectiveness of the system. Others felt a commander was in the best position to accurately assess the readiness of a unit on the basis of a wide range of information available to make this judgment (GAO/T-NSIAD-96-111BR, 1996:14-15).

Gulf War Problems

The Gulf War crisis, August 1990 to February 1991, offered a limited opportunity to compare a unit's readiness for combat, as reported in SORTS, with a Service's willingness to commit that unit to combat. Specifically, the Army indicated that three National Guard brigades required over 120 days of post-mobilization training even though their Commanders reported in SORTS that only the standard 40 days predeployment training would be needed to prepare their brigades for combat duty. The Army's assessment proved to be pessimistic because the three brigades were found to be ready in 90 days, 1 day before the war ended. Since then, a number of reports have identified various limitations in the DoD readiness reporting system, with a primary focus on SORTS. This approach overlooked that fact that over hundreds of units of all Services rated as ready in SORTS, only three were not deployed to the Persian Gulf. This suggested it can still be considered a reliable system, but as noted, there were still some areas that needed improvement (Orlansky et al, 1997:II-2-3).

DoD Remedy

SORTS was criticized because it included various subjective, rather than objective assessments of training readiness and it focused on current not near-future estimates of training (Orlansky et al, 1997:S-1). Commanders sometimes reported overall readiness levels higher than the measured resource areas. Air Force officials said they considered this SORTS feature to be a strength of the system. They believed that a commander was in the best position to accurately assess the readiness of a unit on the basis of a wide range of information available to make this judgment (GAO/T-NSIAD-96-111BR, 1996:3). These subjective assessments were qualitative, where it may not be readily

apparent where ratings are inflated. This subjectivity does not necessarily mean that the judgment was inaccurate or unreliable but it may easily become so if little attention was given to how they were collected and scored (Orlansky et al,1997:III-22).

DoD took actions to improve the SORTS which included phased improvements to the readiness assessment system. The first phase addressed the technical limitations of SORTS in hopes of developing a synchronized DoD-wide system linked across multiple databases. The link with other databases in a common computer environment would make readiness information more readily assessable to decision makers. Also, the upgrades would make the system a lot easier to use. The services already developed or implemented software to automate the process of entering SORTS data at the unit level. Technical upgrades were aimed at improving the timeliness and accuracy, but the upgrades did not address the inability of the system to signal impending changes in readiness which contributed to the lack of precision in reporting unit resources and training. DoD also took steps to introduce a joint component to readiness assessment which brought together a readiness assessment from a broad range of DoD organizations and elevates readiness concerns to senior military officials. It incorporated wartime scenarios, added a joint perspective conducted on a recurring cycle, and included procedures for tracking and addressing reported deficiencies (GAO/T-NSIAD-98-124, 1998:4).

Summary

The chapter discussed background information on SORTS, presented the purpose of SORTS, showed what was required in the SORTS report, addressed concerns with the current system, and justified why the analysis of this system needed to occur.

The war on terrorism and increased deployments are rooted in the changing national military strategy. According to DoD officials, the increased focus on regional security and stability has been accompanied by increased deployments for peace operations (GAO, 1996:10). The systems method helps resolve conflict between current and future readiness. If the Secretary, Chairman, CINCs, and services were able to see the entire system, they would be capable of identifying elements that can be improved in the near term to enhance current readiness. They would do this by identifying elements that could be improved in the longer term with a modernization or force structure program. Visibility of the tradeoffs possible with the systems approach possibly enables better choices about current readiness versus future readiness (Tillson, 2000:3).

There is a general agreement that readiness reporting is flawed and did not accurately reflect operational requirement in the post-Cold War era. Readiness reporting has improved somewhat in recent years with incremental changes to SORTS, which increased the ease and precision of reporting by the services. Also, institutionalizing readiness reporting and responsibilities resulted in enhanced appreciation of readiness issues in the program review process (Tillson, 2000:1). Readiness reporting should eventually become virtually automatic where applications will be updated automatically with unit data. Then, intelligent agents could sweep databases to find readiness problems and bottlenecks and even identify potential workarounds (Tillson, 2000:4).

Commanders were asked to document their perception of the current process and determined the degree to which they perceived the current reports were inflated or realistic. “A fundamental premise of SORTS reporting is integrity. Commanders must “tell it like it is” and not allow the masking of deficiencies affecting their ability to

provide capability or other readiness related information. Risk must be balanced with responsibility. Effective management of unit resources required accurate information at all levels” (AFI 10-201, 2003:8). Therefore, it was time to evaluate the system in order to identify key problems and re-design the process to better reflect units’ capabilities, if necessary.

III. Methodology

This chapter describes the steps taken to answer the research and investigative questions listed in Chapter I, as well as the technique used to answer the questions in this study. This information enables common concerns with the system to be recognized. Then, this data will be used to determine if the SORTS reporting system was effective.

Method of Approach

The goal of this thesis is to analyze the current SORTS reporting system. The war on terrorism and increased deployments are rooted in the changing national military strategy, which makes it necessary for military members to be trained and equipped to fight. In order to evaluate the system, two key research questions needed to be answered: 1) How well did the current SORTS system measure units' readiness? and 2) What were the main issues with the system and how did they affect the desired outcome? This subject has not been systematically explored or documented, so data must be collected from members in the field using the system (Croslen, 1989:62). Since no historical records or data are available, data relied heavily on the efficient use of intuition and judgment of a group of persons who were keen observers and had extensive experience and knowledge in the subject area. The following investigative questions were used to construct a survey in order to gather data for this study:

1. What are the key problems with the current SORTS reporting system?
 - a. What is the information used for?
 - b. How is the current information insufficient?
2. Do the problems vary across different perspectives?
 - a. What are the MAJCOM, Wing, Group, and/or Squadron views?
 - b. Do these interpretations differ across the board?

3. Does AFI 10-201 or future upgrades address the perceived issues with the current SORTS reporting system?

The sample of the population of military members who utilized SORTS consisted of at least thirty personnel assigned to various organizational levels in the ACC and AMC MAJCOMs. The goal of my study was to classify issues with SORTS that were not identified in previous research. Therefore, ensuring a good blend of respondents at all levels, in both MAJCOMS, and of various ranks was not measured because it was not the main focus.

All of the respondents were volunteers that either input and/or used the data for the SORTS report. Data collection and analysis was conducted in a “two-stage” approach.

First Stage. The first stage of this study relied heavily on AFI-10-201 and other limited, existing literature. This stage was outlined by the first investigative question and a portion of the third question. The first investigative question was answered through a literature review and by researching AFI 10-201 to find out SORTS’ objectives. The literature reviewed also discussed problems with SORTS, showing how the current information is insufficient. A portion of the third question was answered through conversations (via telephone or email) with OPRs at the HAF and MAJCOM levels. Issues were addressed by comparing concerns identified in this thesis with AFI-10-201 to determine if the current instruction already addressed them.

Second Phase. The second half of the first investigative question and the second investigative question were answered by surveying MAJCOM, Wing, Group, and Squadron leaders to find out if they had any problems with the current system. This data was collected and organized by common issues, looking for similarities as well as

differences. Inputs were analyzed to see if there were common problems or identified key differences with the various levels of involvement, such as unit level, MAJCOM, and rank of the respondents. Responses were compiled in the areas of agreement as well as disagreement in order to form basic analysis and lessons learned for future recommendations. The third investigative question was also addressed by researching to first find out if there were any future upgrades to SORTS and then determining if these upgrades addressed the identified concerns.

Delphi

The Delphi survey method may be characterized as a technique for structuring a group communication process so that the process was effective in allowing a group of individuals, as a whole, to deal with a complex problem. Members of a group were questioned anonymously via email and asked to list and explain issues. The responses were grouped with similar answers. The goal of the Delphi method is to collect and organize judgments in a systematic fashion. This technique gains input, establishes priorities, and builds consensus. Delphi organizes and helps focus dissent, turning this group effect into a window of opportunity. At the same time, the subjects' identities are protected, and group responses are consolidated by eliminating extraneous material and assuring each respondent's input is included in the final responses. This reduces the pressures of group conformity by revealing a range of responses submitted.

This thesis should be classified as a "modified" Delphi study. Only one set of surveys were distributed to the subjects, and Delphi studies usually require several iterations of interviews.

Justification of Approach

In order to determine if the current SORTS reporting system was effective; a survey was developed to solicit input from experts in the field using the system. Questions were general and less-threatening, progressing slowly to more specific areas. Simple “yes or no” answers were avoided in order to encourage thorough responses from subjects. This involved a situation where no historical records or data was available, so data in this thesis relied heavily on the efficient use of intuition and judgment of a group of persons who had experience and knowledge in the subject area. This was why the Delphi technique was used. This technique was designed to elicit opinions from a group with the aim of generating a group response. ‘Delphi replaces direct confrontation and debate by a carefully planned, anonymous, and orderly program of sequential individual interrogations usually conducted by questionnaires’ (Wellman, 2003:30). The following questions built the framework for the survey used in this thesis, regardless of whether the respondent was an information provider, user, or both.

1. What are the key problems with the current SORTS reporting system?
 - a. What is the information used for?
 - b. How is the current information insufficient?
2. Do the problems vary across different perspectives?
 - a. What are the MAJCOM, Wing, Group, and/or Squadron views?
 - b. Do these interpretations differ across the board?
3. Does AFI 10-201 or future upgrades address the perceived issues with the current SORTS reporting system?

Surveys were distributed by MAJCOM SORTS POCs. They forwarded the surveys to their subordinate SORTS POCs to solicit volunteers within the ACC and AMC MAJCOMs, in order to obtain feedback from personnel who used SORTS in the field. Respondents were located at various bases worldwide from the wing, group, and squadron levels, and the ranks ranged from Airman First Class to Lieutenant Colonel. Respondents emailed responses directly to this thesis' committee so data could be compiled according to similar issues.

The response rate for this study was not tracked. As previously stated, the goal of this thesis was to identify issues with SORTS that were not documented in previous research. Therefore, surveys were sent to as many ACC and AMC personnel as possible who used SORTS in order to simply gather data and identify issues. Once the responses were categorized, contingency tables were constructed with actual and expected values based on three treatments: organizational level, MAJCOM, and rank. The three treatments were arbitrarily selected to study because there is nothing to base these selections on. Contingency tables were most commonly analyzed using the chi-square statistic because the purpose of the chi-square is to compare observed results with expected results to see if the result is likely. Therefore, Chi-Square analysis was conducted to determine if all categories carried equal prevalence. Then, several other Chi-Square analyses were performed to find out if various treatments such as organizational level, MAJCOM, or rank influenced respondents' inputs.

IV. Results And Analysis

Overview

This chapter discusses the findings from the Chi-Square analyses conducted in this study to determine if the issues found, if any exist, were all of equal prevalence. Also, this chapter evaluated various treatments such as organizational level, MAJCOM, or rank to find out if they affected respondents' view of SORTS. Then, issues raised will be compared to a current initiative called the Enhanced Status of Resources and Training System (ESORTS) that was designed to improve SORTS' capabilities.

The Research Process

The research was conducted as described in Chapter Three. However, there are important aspects that need to be highlighted in order to gain a complete understanding of this study. These aspects are response rate and sample size.

As indicated previously, the survey response rate or sample sizes for each treatment was not tracked. The intent of this study was to identify issues with SORTS that were not previously documented in past research. Forty-two surveys were received but seven were blank. As a result, thirty-five respondents' inputs were used for this study.

Sample size for each treatment was not at least 5 subjects. In Chi-Square analyses, at least 5 subjects per group are needed in order to detect any differences. Since all sample sizes in this study do not contain at least 5 subjects per issues per treatment, there is a tendency for a difference not to show up when it really does exist ((McClave, Benson, and Sincich, 2001:961).

Investigative Questions

Through the distribution of surveys, this study polled experts in the field currently using SORTS to answer the following questions and establish a framework for future studies:

1. What are the key problems with the current SORTS reporting system?

a. What is the information used for?

The literature review provided the answer to this question. AFI 10-210 defines SORTS as an internal tool for use by the Chairman Joint Chiefs of Staff (CJCS), Services, Unified Commands, and Combat Support Agencies. It is the single automated reporting system within the DoD that functions as the central registry of all operational units of the U.S. Armed Forces and certain foreign organizations. There are three main purposes for this system: 1) provide critical data to crisis planning; 2) provide data for the deliberate planning process; and 3) to be used by the CSAF and subordinate commanders in assessing their effectiveness in meeting their Title 10, United States Code responsibility (AFI 10-201, 2003:8). SORTS is designed to support crisis response planning; deliberate or peacetime planning and provide the Chairman with Service-unique information regarding a measured unit. SORTS is the DoD's automated reporting system that identifies the current level of selected resources and training status of a unit or in other words its ability to carry out its wartime mission. Units report their overall readiness status as well as the status of four resource areas: personnel, equipment and supplies on hand, equipment condition, and training. As a resource and unit monitoring system, SORTS indicates the level of selected resources and training status required to undertake the full mission set for which a unit is organized or designed to do.

b. How is the current information insufficient?

The second half of the first investigative question was answered by surveying MAJCOM, Wing, Group, and Squadron personnel currently using SORTS in the field. Forty-two surveys were received, but seven were blank. Therefore, 35 surveys were used in this study. Their responses were grouped with similar concerns to determine if users have encountered the same problems with the system. The responses were grouped by similar concerns, showing a frequency count of issues for each of the eleven categories. This data is shown in Table 1 on the next page.

Table 1. Overall Information Per Respondent

MAJ.COM	Level	Rank (JE,SE, JO,SO)	No.	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist	New to the system	None
AMC	Sq	SO	1	1										
AMC	Sq	SE	2		1	1								
ACC	Sq	SE	3				1							
ACC	Sq	SE	4					1						
ACC	Sq	SO	5						1					
ACC	Sq	SO	6			1								
ACC	Sq	SO	7											1
AMC	Sq	SE	8		1									
AMC	Sq	SE	9							1				
AMC	Sq	SE	10											1
AMC	Sq	SO	11		1	1		1						
AMC	Wg	JE	12						1					
AMC	Sq	JO	13								1			
AMC	Sq	SO	14		1	1								
AMC	Wg	SE	15							1		1		
AMC	Sq	SO	16						1					
AMC	Sq	JE	17		1				1			1		
AMC	Sq	JE	18											1
AMC	Sq	JE	19							1				
AMC	Wg	SE	20		1	1			1	1				
ACC	Sq	JE	21			1		1						
ACC	Sq	SO	22			1			1	1	1			
ACC	Sq	SE	23			1			1		1			
ACC	Sq	SO	24	1	1	1			1					
ACC	Sq	JE	25						1					
ACC	Sq	SO	26						1					
ACC	Wg	JE	27						1	1	1			
AMC	Sq	JE	28						1	1				
ACC	Wg	JE	29					1	1					
ACC	Sq	SO	30		1				1					
AMC	Gp	JO	31		1	1	1	1	1					
ACC	Sq	SO	32		1			1						
AMC	Sq	JO	33										1	
AMC	Sq	SE	34											1
ACC	Sq	JO	35										1	
Total				2	10	10	2	6	15	7	4	2	2	4
Total Issues					58						Total Non-Issues			6

Senior Officer (SO) = Majors and Lieutenant Colonels

Junior Officer (JO) = Lieutenants and Captains

Senior Enlisted (SE) = Technical Sergeant – Chief Master Sergeant

Junior Enlisted (JE) = Airman Basic – Staff Sergeant

The main issues listed on the previous page in Table 1 were defined by the respondents as:

- a. **Effectiveness.** Respondent was not certain higher levels in the AF used the data effectively to make decisions. Wing level needed a system to prevent haphazard reporting.
- b. **Accuracy.** Respondents felt there needed to be a way to ensure data was accurate when it was placed in the system.
- c. **Redundancy.** Respondents felt ART and SORTS were redundant processes that needed to be combined.
- d. **ART.** Respondents felt ART was more effective and should be used instead of SORTS, or the respondents felt ART should not be used at all.
- e. **Technology.** Respondents felt the system needed to be automated and streamlined at the unit levels to ensure timely, accurate data.
- f. **Format.** Respondents felt they should report the way they deploy—not as a unit or squadron.
- g. **Training.** Respondents felt a more comprehensive SORTS training program needed to be implemented.
- h. **Confusing.** Respondents felt the instructions were not in plain text and difficult to understand.
- i. **Comprehensive Checklist.** Respondents felt an all encompassing checklist needed to be created.
- j. **New to the System.** Respondent felt they had not worked with SORTS long to provide constructive feedback.
- k. **None.** The Respondent was satisfied with the current system.

Table 1 also provides information such as organizational level, MAJCOM, and rank of each respondent to identify if the member was a member of ACC or AMC and whether he or she worked at the Wing, Group, or Squadron level. The rank of the respondent is also included. The respondent was either categorized as a senior or junior officer or

enlisted member. There were 64 total inputs collected. Fifty-eight were considered issues, and six were considered non-issues because they fell in the “New To the System” or “None” categories. Now that the issues have been identified, it is time to determine if various treatments have an effect on the respondents’ views.

2. Do the problems vary across different perspectives?

a. What are the MAJCOM, Wing, Group, and/or Squadron views?

The next step was to identify the frequency of issues based on treatments:

Table 2. Issues Breakdown By Organizational Level

Level	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist	New to the system	None	Total w/ Issues
Wg	0	1	1	0	1	4	3	1	1	0	0	12
Gp	0	1	1	1	1	1	0	0	0	0	0	5
Sq	2	8	8	1	4	10	4	3	1	2	4	41
Total	2	10	10	2	6	15	7	4	2	2	4	58

Table 2 shown above displays the actual breakdown of concerns based on the organizational level of involvement of the respondents. The last column displays the total number of issues broken down by organizational level. The frequency count of each issue is shown in the bottom row labeled “Total” and also equals the totals of issues per respondent listed in Table 1.

The next chart depicts the frequency count of issues based on the respondent's MAJCOM:

Table 3. Issues Breakdown By MAJCOM

MAJCOM	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist	New to the system	None	Total w/ Issues
ACC	1	2	5	1	4	9	2	3	0	1	1	27
AMC	1	8	5	1	2	6	5	1	2	1	3	31
Total	2	10	10	2	6	15	7	4	2	2	4	58

Table 3 shows the actual breakdown of categories based on the MAJCOM of the respondents. Since there were only two MAJCOMS used in this study, the respondent is either a member of ACC or AMC. The last column shows the total number of issues broken down by MAJCOM. As noted previously, the frequency count of each issue is shown in the bottom row labeled “Total” and also equals the totals of issues per respondent listed in Table 1.

The next page shows Table 4, which displays the breakdown of categories based on the respondents’ rank:

Table 4. Issues Breakdown by Rank

Rank	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist	New to the system	None	Total w/ Issues
SO	2	5	5	0	2	6	1	1	0	0	1	22
JO	0	1	1	1	1	1	0	1	0	2	0	6
SE	0	3	3	1	1	2	3	1	1	0	2	15
JE	0	1	1	0	2	6	3	1	1	0	1	15
Total	2	10	10	2	6	15	7	4	2	2	4	58

Senior Officer (SO) = Majors and Lieutenant Colonels

Junior Officer (JO) = Lieutenants and Captains

Senior Enlisted (SE) = Technical Sergeant to Chief Master Sergeant

Junior Enlisted (JE) = Airman Basic to Staff Sergeant

The chart above shows the actual breakdown of categories based on the rank of the respondents. Respondent fell into one of four categories: senior officer, junior officer, senior enlisted, or junior enlisted. The last column shows the total number of issues broken down by rank. As noted previously, the frequency count of each issue is shown in the bottom row labeled “Total” and also equals the totals of issues per respondent listed in Table 1.

The various perspectives and frequency of issues based on different treatments (organizational level, MAJCOM, and rank) are listed previously in Tables 2, Table 3, and Table 4. Next, Chi-Square analysis was conducted to determine if the treatments affected how the respondents viewed SORTS.

b. Do these interpretations differ across the board?

Chi-Square analysis was conducted to determine if there were differences in SORTS' interpretations across the board. Prior to the Chi-Square Tests, expected values for each of the three treatments were calculated. The expected values were based on the percentage of respondents per treatment that participated in this study. The chart below,

Table 5, shows the weighted percentage of respondents based upon organizational level:

Table 5. Issues Breakdown (Weighted Percentages) By Organizational Level

Level	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist	New to the system	None	Total w/ Issues	Percentag of Respondents w/ Issues
Wg	0	1	1	0	1	4	3	1	1	0	0	12	0.21
Gp	0	1	1	1	1	1	0	0	0	0	0	5	0.09
Sq	2	8	8	1	4	10	4	3	1	2	4	41	0.71
Total	2	10	10	2	6	15	7	4	2	2	4	58	1

Table 5 displays the actual breakdown of concerns based on the organizational level of involvement of the respondents. This chart is similar to Table 2, but the last column displays the total number of issues based on the percentage of respondents from each organizational level. The frequency count of each issue is shown in the bottom row labeled "Total" and also equals the totals of issues per respondent listed in Table 1.

Table 6 on the next page shows the expected values for the organizational level treatment:

Table 6. Issues Breakdown (Expected Values) By Organizational Level

Level	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist
Wg	0.41	2.07	2.07	0.41	1.24	3.10	1.45	0.83	0.41
Gp	0.17	0.86	0.86	0.17	0.52	1.29	0.60	0.34	0.17
Sq	1.41	7.07	7.07	1.41	4.24	10.60	4.95	2.83	1.41
Total	2.00	10.00	10.00	2.00	6.00	15.00	7.00	4.00	2.00

The chart above portrays the expected number of issues based on the percentage of respondents from each organizational level. Expected values were computed by multiplying the weighted percentage of each organizational level by the total number for that issue.

Table 7 on the next page depicts the weighted percentage of respondents based upon their MAJCOM:

Table 7. Issues Breakdown (Weighted Percentages) By MAJCOM

MAJCOM	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist	New to the system	None	Total w/ Issues	Percentag of Respondents w/ Issues
ACC	1	2	5	1	4	9	2	3	0	1	1	27	0.465517
AMC	1	8	5	1	2	6	5	1	2	1	3	31	0.534483
Total	2	10	10	2	6	15	7	4	2	2	4	58	1

Table 7 displays the actual breakdown of concerns based on the MAJCOM of the respondents. This chart is similar to Table 3, but the last column displays the total number of issues based on the percentage of respondents that participated from each of the two MAJCOMs. The frequency count of each issue is shown in the bottom row labeled “Total” and also equals the totals of issues per respondent listed in Table 1.

Table 8 shows the expected values for each MAJCOM:

Table 8. Issues Breakdown (Expected Values) By MAJCOM

MAJCOM	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist
ACC	0.93	4.66	4.66	0.93	2.79	6.98	3.26	1.86	0.93
AMC	1.07	5.34	5.34	1.07	3.21	8.02	3.74	2.14	1.07
Total	2.00	10.00	10.00	2.00	6.00	15.00	7.00	4.00	2.00

The chart on the previous page displays the expected number of issues based on the percentage of respondents from each MAJCOM. Expected values were computed by multiplying the weighted percentage of each MAJCOM by the total number for that issue.

Table 9 lists the weighted percentages of respondents based for each rank:

Table 9. Issues Breakdown (Weighted Percentages) By Rank

Rank	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist	New to the system	None	Total w/ Issues	Percentag of Respondents w/ Issues
SO	2	5	5	0	2	6	1	1	0	0	1	22	0.38
JO	0	1	1	1	1	1	0	1	0	2	0	6	0.10
SE	0	3	3	1	1	2	3	1	1	0	2	15	0.26
JE	0	1	1	0	2	6	3	1	1	0	1	15	0.26
Total	2	10	10	2	6	15	7	4	2	2	4	58	1

Senior Officer (SO) = Majors and Lieutenant Colonels

Junior Officer (JO) = Lieutenants and Captains

Senior Enlisted (SE) = Technical Sergeant to Chief Master Sergeant

Junior Enlisted (JE) = Airman Basic to Staff Sergeant

Table 9 displays the actual breakdown of concerns based on the rank of the respondents.

This chart is similar to Table 4, but the last column displays the total number of issues based on the percentage of respondents that participated from the four rank divisions.

The frequency count of each issue is shown in the bottom row labeled “Total” and also equals the totals of issues per respondent listed in Table 1.

The next chart shows the expected values for each rank:

Table 10. Issues Breakdown (Expected Values) By Rank

Rank	Effectiveness	Accuracy	Redundancy	ART	Technology	Format	Training	Confusing	Comprehensive Checklist
SO	0.76	3.79	3.79	0.76	2.28	5.69	2.66	1.52	0.76
JO	0.21	1.03	1.03	0.21	0.62	1.55	0.72	0.41	0.21
SE	0.52	2.59	2.59	0.52	1.55	3.88	1.81	1.03	0.52
JE	0.52	2.59	2.59	0.52	1.55	3.88	1.81	1.03	0.52
<i>Total</i>	<i>2.00</i>	<i>10.00</i>	<i>10.00</i>	<i>2.00</i>	<i>6.00</i>	<i>15.00</i>	<i>7.00</i>	<i>4.00</i>	<i>2.00</i>

Senior Officer (SO) = Majors and Lieutenant Colonels

Junior Officer (JO) = Lieutenants and Captains

Senior Enlisted (SE) = Technical Sergeant to Chief Master Sergeant

Junior Enlisted (JE) = Airman Basic to Staff Sergeant

The chart above displays the expected number of issues based on the percentage of respondents from each of the four rank divisions. Expected values were computed by multiplying the weighted percentage of each rank by the total number for that issue.

Chi-Square statistics were calculated for each set of actual and expected values in the contingency tables above. Since there are 11 total issues in this study, with 58 being the total number of issues, each issue should carry an equal weight of 5.27 in the first test.

The four tests gave the following results on the next page in Table 11 based on the p-value, or acceptable error rate, which was equal to alpha.

Table 11. Chi-Square Analyses Summary

Null Hypothesis(Ho)	Alternate Hypothesis (Ha)	P-Value	Chi-Square Statistic	Decision
There was no difference in prevalence for the issues identified.	At least one issue differed in prevalence.	.05	.0000901157	Reject Null Hypothesis
The treatment organizational level had an effect on the respondents' issues.	The treatment organizational level had no effect on the respondents' issues.	.05	.773	Fail To Reject Null Hypothesis
The treatment MAJCOM had an effect on the respondents' issues.	The treatment MAJCOM had no effect on the respondents' issues.	.05	.34918	Fail To Reject Null Hypothesis
The treatment rank had an effect on the respondents' issues.	The treatment rank had no effect on the respondents' issues.	.05	.699227	Fail To Reject Null Hypothesis

p-value < alpha, reject the null hypothesis

p-value > alpha, fail to reject the null hypothesis

Each of the four tests contained a null and alternative hypothesis, p-values, Chi-Square Statistics, and a decision based on a Chi-Square statistics and p-value comparison. The first test was conducted to determine if there was a difference in prevalence with the

issues identified in this thesis. The next three tests were performed to determine if organizational level, MAJCOM, rank had any affect on how respondents viewed SORTS.

The first two investigative questions have been answered, so it is time to address the final question.

3. Does AFI 10-201 or future upgrades address the perceived issues with the current SORTS reporting system?

Further literature reviews and HAF and MAJCOM POCs assisted in answering the last investigative question. At the time of this thesis, there was an initiative still in the planning stages and its goal is to revamp the SORTS program.

“The Chief of Staff of the Air Force saw the need to address readiness reporting not only at the unit (squadron) level but also at the UTC level...it was incapable of capturing the requisite data since it was designed for the unit level and therefore did not provide visibility on the packets (UTCs) that make up the basic building blocks for sourcing requirements” (Morton&Tillson, 2002:6).

ESORTS

This initiative is entitled the Enhanced Status of Resources and Training System or ESORTS. ESORTS is defined as an:

...automated, near real-time readiness reporting system that provides resource standards and current readiness status for operational forces and defense support organizations in terms of their ability to perform their mission essential tasks. Establishes a relationship between resource and training inputs and readiness to perform MET based on standards established by the parent DoD component (DODD 7730.65, 2002:8).

This system is built upon SORTS and will provide insights into the current unit and organizational readiness status and resources standards (DODD 7730.65, 2002:3).

ESORTS is a result of the Department of Defense Readiness Reporting System (DRRS),

which will change the format of readiness reporting from a simple statement of the overall status of resources and training, to one specifically focusing on the tasks the units or squadrons perform (Morton&Tillson, 2002:8). The new system is designed to provide commanders at all levels a greater degree of granularity, both in terms of readiness and in terms of task/mission accomplishment (Morton&Tillson, 2002:7).

Based on feedback from experts in the field, the issues identified in this study were compared to the ESORTS initiative to determine if the AF has moved in the right direction and is addressing current concerns. The table on the following page displays the results of this comparison based upon the assumption that ESORTS will be implemented.

Table 12. Issues vs. ESORTS Comparison

ISSUE	Does ESORTS Address?
Effectiveness	Yes. The new system is designed to provide commanders at all levels a greater degree of granularity, both in terms of readiness and in terms of task/mission accomplishment (Morton&Tillson, 2002:7).
Accuracy	Yes. ESORTS will provide more information to commanders because they will have near, real-time and direct knowledge of the readiness status at the succeeding hierarchal levels and have direct knowledge of the readiness status of each MET associated with a UTC (Morton&Tillson, 2002:8).
Redundancy	Yes. ART is similar in many aspects to ESORTS and it will be easy to transition from ART to ESORTS (Morton&Tillson, 2002:8).
ART	Yes. ESORTS will provide more information to commanders because they will have direct knowledge of the readiness status at the succeeding hierarchal levels. They will have direct knowledge of the readiness status of each MET associated with a UTC. This is similar to ART, but ESORTS will aggregate UTCs into AEF METs. (Morton&Tillson, 2002:8).
Technology	Yes. The system is an automated, near real-time readiness reporting system that provides resource standards and current readiness status for operational forces and defense support organizations in terms of their ability to perform their mission essential tasks (DODD 7730.65, 2002:8).
Format	Yes. ESORTS will report readiness specifically focusing on the tasks the units or squadrons perform (Morton&Tillson, 2002:8).
Training	No. ESORTS does not address operational training. However, ESORTS will highlight deficiencies in the areas of training, personnel, equipment, ordnance, and sustainment (DODD 7730.65, 2002:3).
Confusing	No
Comprehensive Checklist	No

Table 12 lists the 9 categories defined as issues in the left column. The right column answers the question “Does ESORTS address?” This was done to determine if the Air Force was moving in the right direction with upgrading SORTS. The ESORTS initiative addressees six of the nine issues listed above. Effectiveness, Accuracy, Redundancy, ART, Technology, and Format are discussed in ESORTS literature. All of these upgrades planned for these categories will augment existing capabilities for a better total system. The areas of Training (operational), Confusing (Text), and Comprehensive Checklist were not mentioned in the ESORTS literature. However, AFI 10-210 did undergo extensive revisions in December 2003, which added over 70 pages of guidance to help clarify and identify proper reporting procedures. Although this was done to make an improvement in SORTS reporting, Confusing Text was still identified on the survey, which means it is still a concern to some users.

This chapter discusses the findings in this study based on the research questions identified in Chapter One. In addition, the chapter also categorized the respondents’ feedback from the surveys they submitted. From that data, issues were identified and tested to determine if they differed in prevalence. Also, the organizational level, MAJCOM, and ranks of each respondent were analyzed to determine if they had an affect on respondents’ views. Finally, the issues identified were compared to a future initiative designed to revamp SORTS to determine if the issues identified would be addressed.

The next chapter will identify the findings in this study. In addition, recommendations for future readiness reporting will be made based on this finding in this study. Finally,

ideas for future research concerning SORTS and readiness reporting in the Air Force will be discussed.

V. Findings and Recommendations

This chapter presents the findings reached during this study. The discussion offers recommendations based on these findings and suggestions for future research.

As stated previously, the Delphi method allows a group of individuals, as a whole, to deal with a complex problem by grouping similar answers to build a consensus. Based on the issues identified and the four Chi-Square tests conducted in this study, the following findings were discovered.

Finding 1

The first finding validates that issues are present with the current SORTS reporting system. The first test was to determine if the issues identified differed in prevalence, or in other words, was one issue listed more than the others. The null hypothesis stated, “There was no difference in prevalence for the issues identified,” and the alternative hypothesis stated, “At least one issue differed in importance.” Chi-Square analysis compared actual and expected frequency counts of each issue. Based on a Chi-Square statistic of .0000901157, which was significantly less than the p-value, or acceptable error rate, of 5%, the null hypothesis was rejected. Therefore, there was a difference in prevalence on at least one of the issues noted by the respondents in this study.

Of the eleven categories identified, Format was the most prevalent category in this study. Problem with format was the reason for the ESORTS initiative. This supports the idea that the Air Force is moving in the right directions to make improvements with SORTS.

Finding 2

The second test was used to determine if organizational level influenced respondents' views. The null hypothesis stated, "The treatment organizational level appeared to have no effect on the respondents' issues," and the alternative hypothesis stated, "The treatment organizational level appeared to have an effect on the respondents' issues." Chi-Square analysis compared actual and expected frequency counts of each issue based on the treatment factor of organizational level. Based on a Chi-Square statistic of .773, which was significantly greater than the p-value, or acceptable error rate, of 5%, the decision was to fail to reject the null hypothesis. Therefore, the treatment or factor, organizational level, appeared to have no affect on the respondents' view of the SORTS reporting system.

Finding 3

In the next test, the null hypothesis stated, "The treatment MAJCOM appeared to have no effect on the respondents' issues," and the alternative hypothesis stated, "The treatment MAJCOM appeared to have no effect on the respondents' issues." Further Chi-Square analysis compared actual and expected frequency counts of each issue based on the MAJCOM treatment factor. This test produced a Chi-Square statistic of .34918, which was significantly greater than the p-value, or acceptable error rate, of 5%, so the decision was to fail to reject the null hypothesis. Therefore, the treatment or factor, MAJCOM, appeared to have no affect on the respondents' view of the SORTS reporting system.

Finding 4

The last Chi-Square analysis compared actual and expected frequency counts of each issue based on the treatment factor of rank. The null hypothesis stated, “The treatment rank appeared to have no effect on the respondents’ issues,” and the alternative hypothesis stated, “The treatment rank appeared to have an effect on the respondents’ issues.” Based on a Chi-Square statistic of .699227, which was significantly greater than the p-value, or acceptable error rate, of 5%, the decision was to fail to reject the null hypothesis. Therefore, the treatment or factor, rank, appeared to have no affect on the respondents’ view of the SORTS reporting system.

Other Recommendations

This study showed there are various concerns with readiness reporting. This process should be monitored on a regular basis because there are various threats worldwide. Also, feedback from experts who have used the system was also valuable information and should always be considered.

Nine issues were identified, and ESORTS did not address three: better operational training, the need for a comprehensive checklist and confusing text. These issues should be considered before the ESORTS initiative is implemented. Also, there could possibly be other issues that exist, but there were only nine issues identified in this study. Other studies should be conducted to determine if other issues exist.

There are unlimited possibilities that exist for future research. Additional studies could include tests to determine the affects of other treatments pertaining to SORTS functionality such as operational personnel vs. logisticians’ views of the system. Also, tests could be conducted to determine if personnel who are “new to the system” and

personnel who are “not new to the system” have similar issues with SORTS within their own groups and/or with the opposing group. Another study may categorize the issues in another fashion, which could produce different results. In addition, total years in service, educational level, and AFSCs could also be possible treatments to study. The final recommendation consists of ranking the importance of the 11 issues found in this study. The issues could be presented to respondents in which they would rank relevant issue’s importance from greatest to least. Then a Chi-Square Test could be conducted to determine the hierarchy of the issues to ensure the issues with the most importance is definitely addressed within any improvements to the system.

There is a lot to be learned by evaluating readiness reporting, particularly the SORTS. They are critical topics, which is why it is very important to evaluate the system’s effectiveness on a regular basis and get feedback from personnel using the system in the field. This must be done to ensure units are prepared to carry out their wartime mission, and the system used to measure units is adequate and effective.

Appendix A.

SORTS Analysis Survey

Purpose: The status of resources and training system (SORTS) is a process that measures the “health” of units and wings in day-to-day preparedness and the ability to execute a major theater war or other scenario envisioned in the national security strategy. With talk of the current reporting system not accurately reflecting units’ readiness, it is time to evaluate the system to identify key problems and re-design the process to better reflect units’ capabilities. The objective of this thesis is to inform Air Force leadership of the current state of the SORTS system to ensure it is adequate. By surveying current MAJCOM, Wing, Group, and Squadron leadership on their interpretations of how the system works, we can find out if there are common problems, if any, that all key stakeholders are encountering.

Participation. We would greatly appreciate your completing this survey. Your participation is COMPLETELY VOLUNTARY. However, your input is important for us to evaluate the process. You may withdraw from this study at any time without penalty, and any data that have been collected about you, as long as those data are identifiable, can be withdrawn by contacting Captain Tia A. Jordan. Your decision to participate or withdraw will not jeopardize your relationship with your organization, the Air Force Institute of Technology, the Air Force, or the Department of Defense.

Confidentiality. ALL ANSWERS ARE STRICTLY CONFIDENTIAL AND ANONYMOUS. No one other than Captain Tia A. Jordan (assigned at the Air Force Institute of Technology which is an organization independent of your organization) will ever see your questionnaire. Findings will be reported at MAJCOM, Wing, Group, and Squadron levels only. We ask for some demographic and unit information in order to interpret results more accurately, and in order to link responses for an entire unit. Reports summarizing trends in large groups may be published.

Questionnaire responses will be stored on the Air Force Institute of Technology’s secure server. This makes it impossible for your leaders to circumvent Captain Tia A. Jordan and try to access any identifiable data without her knowledge. Second, responses will be grouped together and not linked to individuals. You will only know which responses you provided. Finally, the database is protected by a password that is known only by Captain Tia A. Jordan making it impossible to access your data.

I have read the above information and am willing to participate in the study.

Contact information: If you have any questions or comments about the survey contact Captain Tia A. Jordan at the number, mailing address, or e-mail address.

Captain Tia A. Jordan
AFIT/ENS BLDG 642
2950 P Street
Wright-Patterson AFB OH 45433-7765
Email: tia.jordan@afit.edu
Phone: DSN 785-6565, ext. 6169, commercial (937) 785-6565, ext. 6169

**AIR FORCE RESEARCH LABORATORY SPONSORED
ANALYSIS OF THE CURRENT AF-SPECIFIC STATUS OF RESOURCES AND TRAINING
SYSTEM (SORTS) REPORTING PROCESS STUDY**

SORTS ANALYSIS SURVEY

INFORMATION ABOUT THIS STUDY

Thank you for participating in this research project. Your participation in this survey is strictly VOLUNTARY. Your work experience will make an important contribution to the goals of this research project.

Confidentiality of your responses: This information is being collected for research purposes only. The write up and analysis of the SORTS reporting system will be based on cumulative survey responses. No one in your unit, base, or MAJCOM will EVER be allowed to see your individual responses. You are welcome to discuss this questionnaire with anyone you choose, but please wait until they have had a chance to participate.

PRIVACY ACT STATEMENT

In accordance with AFI 37-132, paragraph 3.2, the information below is provided as required by the Privacy Act of 1974.

Authority: 10 U.S.C. 8012, Secretary of the Air Force; powers and duties; delegation by; implemented by AFI 36-2601, USAF Survey Program.

Purpose: To evaluate the current SORTS reporting system to determine if it is effective in measuring unit's readiness.

Routine Use: To increase understanding of the SORTS reporting system. No analyses of individual responses will be conducted. Reports summarizing trends in large groups of people may be published.

Disclosure: Participation is VOLUNTARY. No adverse action will be taken against any member who does not participate in this survey or who does not complete any part of this survey.

BACKGROUND INFORMATION

This information will be used to develop a profile of the participants in this study. Your responses will be kept completely confidential. These items are very important for statistical purposes.

INSTRUCTIONS

1. Please write your name, rank, and office symbol in the spaces provided below. All responses will be kept confidential and anonymous; the information requested on this page will be used for tracking purposes only.
2. Read the INFORMATION ABOUT THIS RESEARCH STUDY and PRIVACY ACT information and answer the following questions.

The success of this project depends on the accuracy of the information you provide. Please do your best to be honest. Your responses will be kept confidential.

ACC

AMC

(Please circle appropriate MAJCOM)

1. Rank: _____

2. Level of Your Involvement With SORTS (circle one): __MAJCOM__ Wing__ Group__ Squadron

3. Primary nature of your involvement:

User of SORTS information _____%
Input SORTS data _____%

4. How old are you? _____

5. Highest education level completed?

- (a) Did not complete High School
- (b) High School Diploma or GED
- (c) 2-Year College Degree
- (d) 4-Year College Degree
- (e) Graduate Degree

6. How long have you worked for the Air Force?

_____years_____months

7. How long have you worked with in your current job?

_____years_____months

8. How long have you worked with SORTS?

_____years_____months

9. What is your current skill level? Enlisted_____ Officer_____

10. What is your AFSC? _____

11. As a user/provider (or both) of SORTS data, what is the problem(s), if any, with the current system? (Please rank your response(s) with "1" being the greatest concern as so forth until all responses are assigned a number.)

This image shows a full page of blank handwriting practice paper. It features approximately 20 evenly spaced horizontal black lines across the entire width of the page, providing a guide for letter height and placement. The background is plain white, and there are no margins, text, or other markings present.

12. Is the current system effective in measuring units' readiness? Please explain.

[illegible]

13. What suggestions would you make to improve the current system?

[illegible]

Thank you very much for completing this important survey. Again, be assured your responses will be held in strict confidentiality and are for research purposes.

Appendix B.

MAJCOM	Level	#11	#12	#13
AMC	Sq	Intent of program is good but not sure how it is effectively used at higher levels in the AF to make decisions	Yes, for the most part	More relative comments
AMC	Sq	None	Yes if the people inputting the information are using accurate information	Do away SORTS and use ART.
ACC	Sq	None	All areas reported within the report are beneficial in measuring units ready to fight posture.	In my opinion, it needs no changes, I actually like SORTS, ART is the hassle.
ACC	Sq	With the age of computers we still submit a handwritten report each month. I believe it would be much easier and accurate if subordinate units of a UTC package submitted their own data electronically each month. We get data sheets approx. 12 different sources, it would be much easier to compile all the data together electronically. Basically the rating is determined by the data anyway unless the commander assesses up. Then when all the reporting is done the package responsible commander can then digitally sign it.	For the most part yes. I believe it takes into consideration the areas that are needed for deploying.	Streamline by using technology more at the unit levels.
ACC	Sq	We do not deploy as a unit/squadron	Yes, keeps you up to date	None
ACC	Sq	redundancies in SORTS and ART that tend to cause some confusion. I	readiness status.	None
ACC	Sq	None	Yes	None
AMC	Sq	None	Yes	I believe SORTS works very well if you are being honest with your input. I would like to see ART become more like SORTS instead of Green/Red
AMC	Sq	None	Yes	A more comprehensive SORTS training program at MAJCOM level for all WING level personnel to attend.
AMC	Sq	Satisfied with current system	Yes	None
AMC	Sq	I don't see any problem with the Sorts system but in many areas I don't believe it should be necessary. We have very expensive globally capable computer systems to track almost all of the information in SORTS and yet instead of people at various levels accessing those systems (CAMS, GO81) and checking our capability and readiness we generate yet another report. It's like the old expression that "a man with 2 watches never really knows what time it is" We generate so many reports and none of them exactly match so if we ever tried to compare them we would have no idea what our true status is.	It's effective, but redundant and I'm not convinced it's always real accurate. If the commander of the unit believes his or her unit can fulfill their war time tasking and the people in the unit believe it as well and they all have a sound understanding of the unit's wartime tasking, a report full of facts and figures really doesn't mean much. The opposite is also true, if the commander and the people aren't convinced that they can accomplish the unit's war time tasking	Automate the system so it can pull the data from already existing data bases and anyone with a need to know at any level can pull up a SORTS report without the pain of individuals manually pulling the data from those data bases and running it through a gauntlet of coordination.

AMC	Wg	None	It's OK. Our unit is somewhat unique in its mission, and don't believe that our DOC fully encompasses our mission ability.	Re-work DOC statement to tailor the specific unit location and their mission in that location. Generalizing requirements are not realistic.
AMC	Sq	It's not in plain text. This requires significant research every month to complete and explain to commanders.	n/a	Put it in plain text.
AMC	Sq	Get well dates are usually fabricated. In many instances, there is no true solution date, but we have to put something. This lends system of skewed information.	I don't have any problems with the system it is employed at higher levels consistently.	No suggestions. When we have to do ART and SORTS together, ART shows a horrible picture...more realistic, but horrible. Not sure what SORTS even tells at that point.
AMC	Wg	1. The only problem that I have experienced in the SORTS arena is the lack of training provided for SORTS Managers. There is a class for the monitors but nothing for managers. We're required to know all of the information contained in AFI 10-201 but we're not afforded any type of training or instruction.		1.)I believe there should be additional SORTS classes scheduled throughout the year for SORTS training. I have been trying to schedule my alternate for training for 3 months now and all of the classes have been full. 2.)AMC should develop one comprehensive Self Inspection checklist. The AMC IG checklist encompasses all aspects of inspecting the SORTS program but the AMC Self Inspection checklist does not. Many questions that should be asked are left off.
AMC	Sq	1 – AFWWUS is the document of record for both steady state and contingency tasks at my MAJCOM, SORTS UTC's and planned tasks are no longer relevant. Why do we report on SORTS UTC's when I haven't been tasked against them in last two wars?	SORTS is good a measuring squadron readiness at a moment in time for generic training and equipment requirements. No gauge is made of experience or specific mission requirements – ready for MTW in Korea, but might have a hard time supporting a different task.	Combine it with ART for the whole picture of UTC's being tasked to fill war and steady state requirements.

AMC	Sq	1.) Current and accurate DOC statement for Unit Designation 2.) DOC statement designation of UTC accuracy 3.) Need for Self-Inspection for units not a smaller version of Wing Self-Inspection	Yes if DOC statements are reviewed annually as required and Unit feedback is used.	Make is easier to coordinate changes to the Unit DOC statement.
AMC	Sq	None	The current system is effective in measuring the OG and the squadron effectiveness in measuring the unit's readiness.	I think the current system is working just fine.
AMC	Sq	A little complicated for beginners. However, I think it is an efficient tool in measuring a unit's readiness.	Yes, as long as the user understands how to input data and the CC is capable of subjective reasoning.	None
AMC	Wg	1.) Outdated Doc Statements. SORTS and ART Reporting. CBDRT and Mobility Bags. (Who reports, who does not, and what are the correct authorizations for the bags).	2.) Confusion between SORTS and ART Reporting. 3.) Yes to a point. However SORTS would be more effective if the Doc Statements were continuously updated. This way the SORTS report would match the unit current mission.	1.) Update the Doc Statements in a timely manner. (I have one Doc Statement with an effective date 1996). 2.) Provide better training in the mobile training course to cover CBDRT Reporting better. I have attended a couple of the mobile teams training courses and CBDRT and Mobility Bags are briefly covered. Covering how to determine the authorizations and who reports would be helpful. 3.) If used properly SORTS Reporting is a very effective tool.
ACC	Sq	1.) Current Guidance dictates we cannot use SIPERNET to transmit the reports to the Command Post (CP). This system is in place for this type of information and SORTS is not tapping into it at the Unit level. 2.) I have been told several times NOT to compare SORTS with ARTS. ARTS is a total "worst case" scenario snapshot; whereas, SORTS seems to only care about a smaller number as defined by the Unit DOC Statement.	No, as explained in 11. (2) above, it revolves around the Unit DOC Statement.	Incorporate the ability to report SORTS via SIPERNET/Website, just like ART reporting.

ACC	Sq	<p>1.) The system is difficult to understand at times so you have to be an expert to correctly complete the report.</p> <p>2.) I'm sure the information is used above base level, but SORTS utility at the base is limited. We focus mostly on ART reporting.</p>	<p>I am not convinced it is a good tool. There are other factors, to include extensive training issues, that affect my unit's ability to go to war that are not measured in SORTS. That said, I am not sure expanding SORTS reporting to include such factors would be worth the effort. I know it would inundate higher levels. What CCs need to do is make an overall rating taking into account SORTS type information and other information to determine their unit's go to war capability. Honestly, however, I am not sure how this can be objectively accomplished. Subjective reasoning and evaluation must be a part of such a decision., unfortunately, such evaluations are not supportable and never looked favorably upon.</p>	<p>See # 12 above. Quite frankly, I prefer the ART format because it forces me to align persons against UTC posturings. Reporting raw numbers as we do in SORTS does not allow for the same effect as we get from ART reporting. If we could build on ART and factor into it some type of training measures, we might have a better system. Additionally, we separate SORTS and ART in the reporting making certain assumptions in one that are probably not valid in the whole. Does not seem to make sense to me.</p>
ACC	Sq	<p>1. THE FORMS ARE TOO COMPLICATED WITH TOO MANY ABBREVIATIONS AND ACRONYMS.</p> <p>2. THE ART REPORT IS ALL THAT IS NEEDED TO REPORT READINESS. YES, IT IS FOR AEF DEPLOYMENTS AND NOT FOR MAJOR THEATER WAR BUT WITH THE CURRENT OIF, WHEN THE CALL CAME TO GO WE WENT. I DIDN'T SEE THAT WHAT WAS REPORTED ON SORTS MADE A DIFFERENCE BETWEEN BEING ASKED OR NOT. AS THE WAR WAS GENNING UP IN DEC-FEB, ALL UNITS HAD TO SUBMIT, BY A SEPARATE TASKER EACH MONTH, AN ANSWER IF WE COULD SUPPORT X UTC.</p> <p>3. SORTS REPORTING DOES NOT WORK WELL WHEN MEMBERS OF AN AFSC ARE SPREAD OUT ALL OVER A BASE LIKE PERSONNEL AND ADMIN TROOPS. THE UNIT DOCUMENTS USED FOR NUMBERS DON'T INCLUDE THE PERSONNELISTS ASSIGNED TO OTHER UNITS</p>	<p>NO BECAUSE IT DOES NOT INCLUDE PERSONNELIST ASSIGNED TO OTHER UNITS THAT CAN BE USED FOR OUR DOC STATEMENT</p>	<p>DELETE IT AND USE ART. THERE IS NO DIFFERENCE BETWEEN MAJOR THEATER WAR AND AEF STEADY STATE DEPLOYMENTS. EACH BASE IS TASKED BY UTC ANYWAY AND THE ART REPORT TELLS THE HEALTH OF EACH UTC. DELETE SORTS FOR SUPPORT UNITS</p>

ACC	Sq	<p>Operations squadrons with DOC statements rely on supporting squadrons to provide them information on resources (people, acft, spare engines, etc.) as an integral part of the SORTS assessment and reporting process. There is lack of definition especially at wings with multiple ops squadrons regarding how to report (e.g., choosing one "Alpha" squadron" and reporting them as green at the expense of the other unit(s)). Also, ops squadrons are reluctant to solicit inputs from supporting squadrons (e.g., AMXS, EMS, CMS, etc.) for one reason or another, and there is no mandatory process at the Wing level to review SORTS. It's up to the supporting squadrons to ask to see a copy of the supported squadron's SORTS report to make sure they are accurately reporting on "their" resources. A more defined process at wing level is needed in the AFI covering SORTS to prevent haphazard reporting ("just use last month's data...it never changes") and make sure everyone with a stake in the report has a chance to review it before it goes up to the MAJCOM...Also, the AEF Center ART reporting tool duplicates info that should be</p>		
ACC	Sq	Ops Units are still reporting Maintenance	n/a	n/a
ACC	Sq	<p>Provider. The problem is the system really doesn't tell you anything. My aircraft stats are from the maintenance unit. I have yet to understand how they can send the number sup that they do. My number are the best I can come up with. That doesn't tell you they are trained etc.</p>	No, see above	I'm not sure I have a solution. I think percentage trained (first time cdc pass, checkrides ect) are more important.

ACC	Wg	<p>1. AFSORTSDET is not a user friendly program. I encounter many problems with AFSORTSDET that even my MAJCOM reps do not have a solution to.</p> <p>2. If our units are tasked to deploy and they are not fully capable they will take assets from other squadrons for fill up the squadron being tasked. The way SORTS is measured it does not give room to reflect situations like these.</p> <p>3. The unit SORTS monitors are not receiving adequate training at the SORTS MTT Classes from AETC.</p>	<p>NO, If our flying units or combat comm. units are tasked to deploy and they are not fully capable they will take assets from other squadrons to full up the squadron being tasked. The way SORTS is measured it does not give room to reflect situations like these.. The unit commanders are constantly complaining to me that we should report as a wing or a group</p>	<p>I believe a system should be developed to replace AFSORTSDET that will allow the information to be updated as soon as it is input into the system. The program should not have error messages that take 24 hours to receive. The error messages should pop up immediately after the incorrect information has been input.</p>
AMC	Sq	<p>1. The SORTS monitor class really needs to be more in depth. The class I went to was only for 3 days and two of those days we got out really early. The class did not explain to us in detail how we should build reports. The attempt was there, but the instructor went fast and did not cover the entire information needed for processing SORTS. I say this because the people that come back from the class are still concerned as was myself.</p> <p>2. I am pretty good with remarks on paper, but more inclusive guidance from AMC would help. For example: Personnel-if you have people on leave or TDY, exactly what information would you like in there. I.e. AFSC/What the AFSC is and Schedule return dates. We have guidance already, but I feel there should be no room for error. What a better way than if it is in writing. This would also help me when I train new SORTS Monitors. I have the current guidance, but I feel that the more information that we have in the system the better. As it is right now, The Monitors can put what they like and I cannot really say much to them except that I w</p>	<p>The current system works fine.</p>	<p>none</p>

ACC	Wg	<p>1.) I have a huge problem with the MEQLOCN because it never accurately updates my aircraft. Sometimes I have triple the aircraft that I have actually reported. 2.) Sometimes my reports come up overdue when I know I updated them way before they were due 3.) I have to enter a userid and password everytime I want to get into FTP 4.) It takes too long for easy reads to update. 5.) I hate having to do the hard return after inputting all the information</p>	<p>yes and no-sometimes I am not able to accurately report a unit's percentage because the system likes it to stay at 100% as long as they are still in that category.</p>	<p>I'm not creative enough to do any of that, but perhaps something that will automatically tell you when you've made an error</p>
ACC	Sq	<p>1) Despite having a C-4 rating we have deployed twice, for OEF and for OIF, and have done superbly, but only after great emphasis was placed on getting us new equipment at the MAJCOM level 2) My squadron has 14 deployable UTCs and SORTS treats them all equally, as 1 of 14 for my S-rating. The problem, some of these UTCs are so critical that if we don't have it we don't get to do our mission. The S-rating needs significant work to adequately "rate" our UTC status against DOC mission 3) SORTS is supposedly the system I use to report status up the chain and it should be the basis for additional training and resources being provided to the squadron as needed. I have yet to be given any training or resources that was directly linked to any SORTS reporting information. 4) The reality of the Air Force manning situation means I qualify many individuals on multiple UTCs and when the time comes to deploy I must work with the MAJCOM to determine the priority of the UTCs they may want this deployment, since I can't man them all. This fact does not readily stand out in the current SORTS reporting system.</p>	<p>No, I do not feel that it is. There are times when I have been C-4 and feel I am more mission capable than if I were C-2, or when compared to other squadrons who's SORTS rating may be higher</p>	<p>Prove to commanders that SORTS is used by leadership and show them how resources are distributed based on SORTS ratings. The perception is it's an outdated tool that we must fill out because that's the way we do it in the military. If it has outlived it's usefulness, replace it. ACC uses ART now, is that a coincidence?</p>
AMC	Gp	<p>1.) The process being used for SORTS reporting does not provide detailed information at point of data entry. You must read through multiple line entries to identify specifically what UTC is having what problems. Very Fragmented. Using ART format for reporting, provides specific and detailed information in a snapshot perspective. Adding a cover page that allows a commander to rate readiness capability (SORTS LEVEL) would give you the best of both worlds without all the fragmented data for UTC's being scattered across multiple pages. Red is not ready to deploy and Green is ready to deploy.... There is no gray area. 2.) With next rotation of Designed Operational Capability (DOC) statements having all UTC's from the AFWUS included except for DXX and AXX, if a process is not created to merge SORTS and ART into a single report we will be completing two separate formats for the same data, greatly enhancing the possibility for erroneous and conflicting data to be presented. i.e. when SORTS is processed a UTC may be non-deployable but when ART is completed a week later the UTC is reported Green.</p>	<p>No see above in 11</p>	<p>As mentioned above. A single reporting tool that provides snapshot of specific UTC and the capability of it being able to meet it's deployable mission. As much effort as possible should be made to extract portions of data from existing electronic means. i.e. pulling medical equipment status from DMLSS, versus using 30 day old data on what percentage we were at.</p>

ACC	Sq	I hate having to do the hard return after inputing all the information	No. We consider too many people available when they are not. Can't get them back to redeploy.	n/a
AMC	Sq	I just started doing SORTS so I don't have any problems with it as of now	n/a	n/a
AMC	Sq	I really don't get that involved with the report itself	I assume so.	None
ACC	Sq	I have not worked with SORTS enough to give any constructive feedback.	blank	blank
AMC	Sq	blank	blank	blank
AMC	Sq	blank	blank	blank
AMC	Sq	blank	blank	blank
ACC	Sq	blank	blank	blank
AMC	Sq	blank	blank	blank
AMC	Sq	Nothing	Nothing	Nothing

Bibliography

1. Air Force Instruction 10-201. *Status of Resources and Training System*. 30 January 2003.
2. Barelka, Alex J. *An Evaluation of Information Technology (IT) Outsourcing Determinants Within the Department of Defense (DoD)*. MS Thesis, AFIT/GIR/ENV/01M-02. School of Engineering and Management, Air Force Institute of Technology (AU), Wright Patterson AFB OH, March 2001 (ADA390880).
3. Croslen, Rodney L. *Improving the Response Capabilities of RED HORSE: A Force Module Approach*. MS Thesis, AFIT/GEM/DEE/89S-7. School of Systems and Logistics, Air Force Institute of Technology (AU), Wright Patterson AFB OH, September 1989 (ADA215853).
4. Department of Defense Directive 7730.65. *Department of Defense Readiness Reporting System (DRRS)*, 3 June 2002.
5. Leedy, Paul D and Ormrod, Jeanne Ellis. *Practical Research: Planning and Design*, 7th ed. Columbus: Merrill Prentice Hall, 2001.
6. Morton, Larry and Tillson, John. *Review Draft: Air Force Readiness Reporting in ESORTS by UTC and TASK*, Alexandria, VA: Institute for Defense Analyses, 13 November 2002.
7. McClave, Benson, and Sincich. *Statistics for Business and Economics*. 8th ed. New Jersey: Prentice Hall, 2001.
8. Orlansky, Jesse et al. *Indicators of Training Readiness*. Alexandria: Institute for Defense Analysis, 1997.
9. Tillson, John C.F. *A Systems Approach to Readiness Reporting*. Joint Force Quarterly, Winter 2000-1, Issue 27, p. 61, 5 pgs.
10. U.S. General Accounting Office. *Military Readiness: A Clear Policy Is Needed to Guide Management of Frequently Deployed Units*, Washington D.C.: General Accounting Office, April 1996.
11. U.S. General Accounting Office. *Military Readiness: Congress Needs Better Tools for Effective Oversight*, Washington D.C.: General Accounting Office, GAO/T-NSIAD-98-124, March 1998.

12. U.S. General Accounting Office. *Military Readiness: Data and Trends for January 1990 to March 1995*, Washington D.C.: General Accounting Office, GAO/NSIAD-96-111BR, March 1996.
13. U.S. General Accounting Office. *Military Readiness: Data and Trends for April 1995 to March 1996*, Washington D.C.: General Accounting Office, GAO/NSIAD-96-194, August 1996.
14. Wellman, Gary L. *A Delphi Expert Assessment of Proactive Contracting in an Evolutionary Acquisition Environment*. MS Thesis, AFIT/GAQ/ENV/03-09. School of Engineering and Management, Air Force Institute of Technology (AU), Wright Patterson AFB OH, March 2003 (ADA415351).

Vita

Captain Tia A. Jordan graduated from Stratford High School in Goose Creek, South Carolina. She entered undergraduate studies and received her commission at the United States Air Force Academy in Colorado Springs, Colorado where she graduated with a Bachelor of Science degree in Behavioral Sciences.

Her first assignment was at the University of Michigan, AFROTC Detachment 390, as a Gold Bar Recruiter in 1998. In August 1999, she was assigned to the 377th Air Base Wing, Kirtland AFB, New Mexico where she served as the Vehicle Operations Officer, Chief of Combat Readiness, and the Wing Executive Officer. While stationed at Kirtland, she deployed overseas in December 2000 to spend three months in Riyadh, Saudi Arabia as the 320th Expeditionary Logistics Squadron Chief of Transportation. In August 2003, she entered the Graduate School of Engineering and Management, Air Force Institute of Technology. Upon graduation, she will be assigned to the Headquarters Air Mobility Command.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 074-0188	
<small>Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</small>					
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 03-05-2004		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) Aug 2003 - Mar 2004	
4. TITLE AND SUBTITLE ANALYSIS OF THE CURRENT AIR FORCE-SPECIFIC STATUS OF RESOURCES AND TRAINING SYSTEM (SORTS) REPORTING SYSTEM				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Jordan, Tia A., Captain, USAF				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 P Street, Building 640 WPAFB OH 45433-7765				8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GLM/ENS/04-07	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.					
13. SUPPLEMENTARY NOTES					
<p>The status of resources and training system (SORTS) is a process that measures the "health" of units and wings in day-to-day preparedness and the ability to execute a major theater war or other scenario envisioned in the national security strategy. With talk of the current reporting system not accurately reflecting units' readiness, it is time to evaluate the system to identify key problems and re-design the process to better reflect units' capabilities. The objective of this thesis was to inform Air Force leadership of the current state of the SORTS system to ensure it was adequate. By surveying current MAJCOM, Wing, Group, and Squadron users on their interpretations of how the system works, this thesis will determine if there are common problems that key users have encountered.</p>					
15. SUBJECT TERMS SORTS, Readiness, Readiness Reporting, Delphi, Qualitative, Chi Square Analysis					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 77	19a. NAME OF RESPONSIBLE PERSON Stephen M. Swartz, Lt Col, USAF (ENS)
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U			19b. TELEPHONE NUMBER (Include area code) (937) 255-6565, ext 4285; e-mail: Stephen.Swartz@afit.edu

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39-18